REMARKS

The Office Action mailed May 19, 2006 considered claims 1-48. Claims 3, 4, 7, 8, 9, 16, 17, 20, 21, 22, 30, 35 and 36 were objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Claims 44 and 45 were rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. Claims 18-22, 25, 26, 29, 30, 34-36 and 43 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1-40 were rejected under 35 U.S.C. 103(a) as being unpatentable over Knowlton (US 6157389) and in further view of Sekiguchi et al. (US 20010004739 A1). Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Knowlton and Sekiguchi, et al., as applied to claims 1-40 above, and further in view of Hladik (US 20040019590 A1).[1] Claims 42-48 were found to contain allowable subject matter.

By this paper, claims 1, 3-4, 7-9, 14, 16-17, 20-22, 27-30, 32, 34-35, 38, 43 and 45 have been amended and claim 44 has been cancelled, such that claims 1-43 and 45-48 remain pending, and of which claims 1, 14, 27, 32 and 38 are the only independent claims at issue. Support for the amendments is found throughout the specification, including the disclosure found in paragraph [0033].

As reflected above, in the claims listing, the claims are generally directed to embodiments for reducing memory requirements for displaying tables in a user interface. Claim 1, for example, recites a method of reducing memory requirements is recited that is implemented within a grid control for displaying a user interface comprising a table that is a visual representation of a database and that enables a user to read and interact with content of the database, wherein the grid control comprises a plurality of cell objects organized as a plurality of row objects and one or more column objects, wherein for each of the plurality of row objects, one or more user interface characteristics are stored in one or more row characteristic objects. The memory requirements are reduced by for the grid control and corresponding table UI by sharing a single row characteristic object between two or more row objects. In particular, a first

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[1] Although the prior art status of the cited art is not being challenged at this time, Applicant reserves the right to challenge the prior art status of the cited art at any appropriate time, should it arise. Accordingly, any arguments and amendments made herein should not be construed as acquiescing to any prior art status of the cited art.

row object that comprises one or more first cell objects is created for use in organizing the one or more first cell objects and data associated with the one or more first cell objects and for presenting the data within the grid control on the table UI. A second, similar row object is also created for the same general purpose. A row characteristic object is then created, which is also used for determining how the data associated with the one or more first and second cell objects should be presented. The row characteristic object links the first and second row objects through an index, such that the row characteristic object is shared between the first and second row objects. However, the data associated with each of the one or more first and second cell objects is stored separately from the first and second cell objects where characteristic information for each corresponding cell object is located. As further clarified by the latest amendments, a state list is also maintained that includes state information that is redundant with state information maintained for each row.

Claim 14 is similar to claim 1, except that it recites functional "step for" language, which invokes interpretation under §112 paragraph 6, rather than using the non-functional "acts" language recited in claim 1. It will be noted, in this regard, that the double patenting rejection should be withdrawn, inasmuch as claims 14-37 are not substantial duplicates of claims 1-13, since they statutorily require different interpretations.

Claims 27 and 32 are directed to corresponding computer program products for implementing the methods recited in claims 1 and 14, respectively.

Finally, claim 38 is directed to a related computer program product comprising routines for creating the row characteristics and row objects.

There were several objections to the claims (corresponding to claims 8, 9, 16, 17, 20, 21, 22, 30, 35 and 36) and a few rejections under 35 U.S.C. 112 (corresponding to claims 18-22, 25-26, 29-30, 34-36 and 43). All of these objections and rejections are now moot in view of the amendments that have been made to the dependent claims to provide adequate antecedent basis and definiteness.[2]

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[2] It will be noted that Applicants traverse the indefiniteness rejection to claim 43. Initially, the definitions of the terms "inherent characteristic", "actual characteristic," and "compatible" would be appreciated and ascertainable to one of ordinary skill in the art at the time of the invention. Nevertheless, the claim has been amended to omit the designations of "inherent" and "actual" for the characteristics that are determined to be compatible. This amendment, however, merely broadens the interpretation of the claim. Furthermore, it should be appreciated that the term "compatible," even if it is relative, is still definite in the manner claimed. In particular, the relativity of the

Claims 44 and 45 were also rejected under 35 U.S.C. 112 for purportedly failing to comply with the written description requirement. In particular, it was asserted that these claims contained subject matter that was not adequately supported by the specification. Applicants respectfully disagree. It was asserted that the specification provided no support for the limitation requiring the 'maintenance of a state list with state information that is redundant with state information maintained for each row.' However, as recited in paragraph 33 of the specification, "the State List 310 is an additional copy of the rows' states... Because a source Table Row Object, e.g., 330, includes state information also, this duplication State List 310 of state information will typically contain the actual states of the rows. ...Although, this introduces some data duplication, the ability to be able to change the states of a shared row without unsharing it is worth the additional memory allocation." As also stated, "This feature allows a user to change the state of a particular row without unsharing the particular row." Clearly this disclosure supports the limitations that were recited in claims 44 and 45 regarding the maintenance of a state list with state information that is redundant with state information maintained for each row (claim 44) and changing the state of a particular row having a shared row characteristic with another row characteristic without unsharing the row characteristics of the particular row and the other row (claim 45).

The foregoing limitation of claim 44 is now rewritten in each of the independent claims. Accordingly, inasmuch as there is clear support for this limitation, so as to overcome the 112 rejections, and inasmuch as the Examiner has apparently agreed that the subject matter of claim 44 would be allowable over the art of record if rewritted to overcome the rejections of 35 U.S.C. 112 (OA page 14), all of the claims should now be found allowable over the cited art of record.

Now, with regard to the cited art (Knowlton and Sekiguchi), Applicants again respectfully submit that the cited art is non-analogous to the present invention and should not be applied to reject the claims. In particular, whereas, the present invention corresponds to memory constraints and issues relating to spreadsheets, tables and other database user interfaces, the cited art does not appear to have any relation to this technology. Instead, the cited art corresponds generally to image rendering, with Knowlton focused on methods for reducing the size of an image and Sekiguchi focused on image retrieval.

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term is definitively limited to the scope of the claim, namely, the compatibility of cell characteristics. Clearly one of ordinary skill in the art would not have difficulty in determining whether cell characteristics are compatible.

Because of the great disparity between the cited art and the claimed invention, it make is difficult to address the rejections of record. Accordingly, rather than address each individual assertion or rejection, Applicants respectfully submit that the cited art fails to read on claims, such as the recited claims, that correspond to methods for reducing memory requirements of the grid control by sharing a single row characteristic object between two or more row objects, particularly when the grid control is for displaying a user interface comprising a table that is a visual representation of a database and that enables a user to read and interact with content of the database, and wherein a state list is maintained with state information that is redundant with state information maintained for each row, as claimed in combination with the other recited claim elements.

In view of the foregoing, Applicants respectfully submit that the other rejections to the claims are now moot. Although the foregoing remarks have focused primarily on the independent claims, it will be appreciated that, for at least the foregoing reasons, all of the other rejections and assertions of record with respect to the remaining claims, including the dependent claims, are now moot, and therefore need not be addressed individually. It will be appreciated, however, that this should not be construed as Applicants acquiescing to any of the purported teachings or assertions made in the last action regarding the cited art or the pending application, including any official notice. Instead, Applicants reserve the right to challenge any of the purported teachings or assertions made in the last action at any appropriate time in the future, should the need arise. Furthermore, to the extent that the Examiner has relied on any Official Notice, explicitly or implicitly, Applicants specifically request that the Examiner provide references supporting the teachings officially noticed, as well as the required motivation or suggestion to combine the relied upon notice with the other art of record.

In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney.

Dated this 19th day of July, 2006.

Respectfully submitted,

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